

**15 FEBRUARY 2000**



**Safety**

**LAUNCH DISASTER CONTROL GROUP  
PROCESS**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction implements Western Range Safety Policies and Processes, as prescribed by EWR127-1, *Eastern and Western Range 127-1*. It governs procedures, assigns responsibilities, directs actions, and establishes policies for conducting Pre- and Post-Launch Disaster Control Group (LDCG) activities.

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## 1. General Information

**1.1. Overview.** This Instruction is established to identify specific duties and responsibilities of the Launch Disaster Control Group and supporting agencies during pre- and post-launch activities. Specific responsibilities are identified in **Paragraph 2.** of this Space Wing Instruction.

**1.2. Responsibility.** The 30 SW Pad Safety Office (30 SW/SEGP) is the Office of Primary Responsibility (OPR) for this instruction and is responsible for its currency. The Pad Safety Office also ensures this instruction does not conflict with other directives. In the event of conflict, instructions from higher levels of command take precedence. Send written recommendations for improvements to 30 SW/SEGP.

**1.3. Terms and Acronyms.** Terms and acronyms used are per Air Force Manual (AFM) 1-1, *Air Force Glossary of Standardized Terms*, Intercontinental Ballistic Missile (ICBM) Abbreviation/Acronyms listing, and EWR 127-1 (see **Attachment 1**).

## 2. Responsibilities:

### 2.1. 30 th Space Wing:

2.1.1. 30 SW/CP (Command Post) will:

2.1.1.1. Provide a representative to attend LDCG planning meeting.

2.1.1.2. Act as an advisor to the On-Scene Commander (OSC) during a launch anomaly.

2.1.2. 30 SW/PA (Public Affairs) will:

2.1.2.1. Provide the LDCG Team Chief (prior to the LDCG planning meeting) with the location/positioning of public and distinguished visitor viewing areas.

2.1.2.2. Provide a representative to LDCG planning meeting.

2.1.2.3. Act as an advisor to the OSC during a launch anomaly.

2.1.3. 30 SW/SEGP (Pad Safety, LDCG Team Chief) will:

2.1.3.1. Receive notification from the Mission Flight Control Officer (MFCO) or Flight Analysis of the next scheduled launch (date and time).

2.1.3.2. Receive evacuation notices and footprint maps from 30 SW/SEY (Flight Analysis) for all affected launch areas.

2.1.3.3. Notify 30 CS/SCSOS1 of launch schedule and receives tracking locations.

2.1.3.4. Contact all support agencies to ensure members and other agencies that interact with the LDCG are notified of the meeting schedule and briefing material required (if applicable).

**NOTE:** Briefing material should be provided to the LDCG Team Chief NLT three duty days prior to the LDCG planning meeting, see **Attachment 2**.

2.1.3.5. Coordinate with Security Forces to determine positions of roadblocks for the affected

launch.

2.1.3.6. Produce and disseminates a Launch Support Plan (LSP) for each launch. Copies are provided at the Launch Disaster Control Group (LDCG) planning meeting .

2.1.3.7. Verify communication requirements are established at the fallback area.

2.1.3.8. Prepare briefing materials for SE representative to present at the Launch Battle Staff Briefing.

2.1.3.9. Verify all POVs and high value equipment are removed from the impact limit line prior to launch (normally conducted 48 hours prior to the launch).

2.1.3.10. Receive and compiles Entry Access List (EAL) for mission-essential personnel only, from all affected agencies that includes name, rank, last six numbers of SSAN, location, and telephone number at T-0. Ensures the EAL is disseminated to all required agencies.

2.1.3.11. Attend the LRR to provide LDCG readiness information as needed.

2.1.3.12. Arrive at designated fallback at a specified time as directed in the LSP.

2.1.3.13. Coordinate with and maintains communications with the OSM, MFCO, LOCC, and Vandenberg Command Post as necessary.

2.1.3.14. Control the FHA/FCA, ILL, and PHZ (when applicable).

2.1.3.15. Evacuate the FHA/FCA, PHZ, and the ILL.

2.1.3.16. Verifies support agencies and equipment are ready to support the launch.

2.1.3.17. Provide safety portion of the T-60/30 minute briefings at the fallback for all LDCG forces. This briefing includes safety, payload recovery (if applicable), and DCG concerns as well as procedures for recovering from a nominal launch, see **Attachment 6**.

2.1.3.18. Proceed to site, assesses and notifies the OSM of post-launch damage for nominal launches.

2.1.3.19. Ensure appropriate support agencies are allowed access to the site (as required) during normal post-launch activities.

2.1.3.20. Act as the Safety advisor to the On-Scene Commander (OSC) during a launch anomaly, see **Attachment 7**.

2.1.3.21. Provide count and location of personnel inside the ILL to the OSC, Interim Mishap Board President, and LBS (when formed).

2.1.3.22. Prepare a Launch Battle Staff Support guide for use by the Safety Contingency Support Staff representative (when the battle staff is convened), see **Attachment 5**.

2.1.3.23. Prepare a LDCG historical package for office file, see **Attachment 8**.

2.1.4. 30 SW/SEY (Flight Analysis) will:

2.1.4.1. Provide a representative to attend LDCG planning meeting.

2.1.4.2. Provide crash grid footprint maps to LDCG Team Chief.

2.1.4.3. Notify LDCG Team Chief of all areas to be evacuated prior to launch.

2.1.4.4. Provide Hot Spill Toxic Hazard Zone data IAW 30 SWI 91-106, *Toxic Hazard Assessments*.

2.1.4.5. Assess risk to personnel supporting in forward locations and provides evacuation requirements to the LDCG Team Chief through the MFCO.

2.1.5. 30 SW/SEO (Mission Flight Control) will:

2.1.5.1. Provide a representative to attend LDCG planning meeting.

2.1.5.2. Provide schedules of upcoming launches.

2.1.5.3. Provide launch area map for launch vehicle.

2.1.5.4. Provide EAL to LDCG Team Chief for Safety launch support personnel NLT three days prior to launch.

2.1.5.5. Provide Hot Spill Toxic Hazard Zone to LDCG Team Chief.

2.1.5.6. Provide “time to endanger” to LDCG Team Chief.

2.1.5.7. Provide a head count of outside observers to LDCG Team Chief.

## **2.2. 30 th Medical Group:**

2.2.1. 30 AMDS/CC (30 Aerospace Medicine Commander) will:

2.2.1.1. Provide a representative to attend LDCG planning meeting.

2.2.1.2. Provide EAL to the LDCG Team Chief for medical launch support personnel for all South Base launches NLT three duty days prior to launch.

2.2.1.3. Provide standby personnel and equipment in support of all missile/space launches.

2.2.2. 30 AMDS/SGPB (Bioenvironmental Engineering Flight) will:

2.2.2.1. Provide Bioenvironmental briefing materials to the LDCG Team Chief (prior to the LDCG planning meeting) and conducts a Bioenvironmental briefing at the LDCG planning meeting.

2.2.2.2. Provide EAL to the LDCG Team Chief for SGPB launch support personnel NLT three duty days prior to launch.

2.2.2.3. Provide advice to the LDCG Team Chief during pre- and post-launch activities.

2.2.2.4. Provide Bioenvironmental representative at fallback area as deemed necessary by LDCG Team Chief.

2.2.2.5. Act as advisor to the OSC during a launch anomaly.

## **2.3. 30 th Support Group:**

2.3.1. 30 SPTG/CC will:

2.3.1.1. Act as OSC or appoint designated representative as OSC for all launch activities.

2.3.1.2. OSC receives LDCG planning meeting from all supporting agencies.

2.3.1.3. Provide T-60/30 briefing to LDCG element.

2.3.1.4. The OSC is positioned at the fallback area during all launches.

2.3.1.5. OSC assumes responsibility of the mishap area and LDCG assets in the event of a launch anomaly.

2.3.2. 30<sup>th</sup> Civil Engineer Squadron:

2.3.2.1. 30 CES/CED (Explosive Ordnance Disposal) will:

2.3.2.1.1. Provide a representative to attend LDCG planning meeting.

2.3.2.1.2. Provide EAL to the LDCG Team Chief for CED launch support personnel NLT three duty days prior to launch.

2.3.2.1.3. Provide standby support for all space launches.

2.3.2.1.4. Provide CED support personnel at the fallback area during all Peacekeeper launches and remains on standby for all other FDE launches.

2.3.2.1.5. Maintain (in their possession) a listing of all ordnance carried aboard the missile or space booster and payload. The listing will aid in accounting for each component.

2.3.2.1.6. Act as advisor to the OSC during a launch anomaly.

2.3.2.2. 30 CES/CEF (Fire Department) will:

2.3.2.2.1. Provide fire safety briefing materials to the LDCG Team Chief (prior to the LDCG planning meeting) and conducts fire response status briefing at the LDCG planning meeting.

2.3.2.2.2. Provide EAL to the LDCG Team Chief for CEF launch support personnel NLT three duty days prior to launch.

2.3.2.2.3. Advise LDCG Team Chief of pre-launch fire concerns.

2.3.2.2.4. Brief LDCG Team Chief of fire response equipment status.

2.3.2.2.5. Provide Fire Chief support at fallback area.

2.3.2.2.6. Advise LDCG Team Chief on status of site and when fire hazard is abated post-launch.

2.3.2.2.7. Act as advisor to the OSC during a launch anomaly.

2.3.2.3. 30 CES/CEO (Operations Flight) will:

2.3.2.3.1. Provide facilities/plant operations briefing materials to the LDCG Team Chief (prior to the LDCG planning meeting) and conducts a facility/plant operations status briefing at the LDCG planning meeting.

2.3.2.3.2. Provide EAL to the LDCG Team Chief for CEO launch support personnel NLT three duty days prior to launch.

2.3.2.3.3. Act as an advisor to the OSC during a launch anomaly (on standby at shop).

2.3.2.3.4. Provide fire dozer and crew to support fire department at location to be determined by Fire Chief.

2.3.2.4. 30 CES/CEX (Readiness Flight) will:

2.3.2.4.1. Provide readiness briefing materials to the LDCG Team Chief (prior to the

LDCG planning meeting) and conducts a Readiness briefing at the LDCG planning meeting.

2.3.2.4.2. Provide EAL to the LDCG Team Chief for CEX launch support personnel (to include the OSC) NLT three duty days prior to launch.

2.3.2.4.3. Provide support to the LDCG Team Chief during pre- and post-launch activities.

2.3.2.4.4. Establish the Mobile Command Post (with communication link) at the fallback area.

2.3.2.4.5. Act as advisor and recorder to the OSC during a launch anomaly.

### 2.3.3. 30<sup>th</sup> Security Forces Squadron:

#### 2.3.3.1. 30 SFS/SFOS-M (Missile Operations Support) will:

2.3.3.1.1. Provide security briefing materials to the LDCG Team Chief (prior to the LDCG planning meeting) and conducts security status briefing at the LDCG planning meeting.

2.3.3.1.2. Provide EAL to the LDCG Team Chief for SFOS-M launch support personnel NLT three duty days prior to launch.

2.3.3.1.3. Ensure the Flight Hazard Area (FHA), Flight Caution Area (FCA), and Impact Limit Line (ILL) area is swept and evacuates all nonessential personnel.

2.3.3.1.4. Verify essential personnel against the EAL list inside the FHA, FCA, and ILL.

2.3.3.1.5. Provide security forces personnel for 76 HF helicopter pre-launch operations.

2.3.3.1.6. Coordinate (with the LDCG Team Chief) positioning and activation of essential roadblocks in support of all launch activities.

2.3.3.1.7. Provide security forces for required audiovisual tracking sites as deemed necessary by the LDCG Team Chief.

2.3.3.1.8. Provide security support at the fallback area.

2.3.3.1.9. Provide security escort for LDCG response team to the launch site during nominal post-launch.

2.3.3.1.10. Act as advisor to the OSC during a launch anomaly

### 2.4. 30<sup>th</sup> Logistics Group:

#### 2.4.1. 30<sup>th</sup> Transportation Squadron:

##### 2.4.1.1. 30 TRNS/LGTO (Vehicle Operations Flight) will:

2.4.1.1.1. Provide a representative to attend LDCG planning meeting.

2.4.1.1.2. Provide mobile maintenance and wrecker support at designated locations for all missile launch activities

2.4.1.1.3. Remove unauthorized vehicles from the Safety Control Areas for Launch Operations as directed by the LDCG Team Chief.

2.4.1.1.4. Provide transportation support to the OSC in the event of an anomaly.

2.4.2. 30<sup>th</sup> Communications Squadron:

2.4.2.1. 30 CS/CCE (Chief Executive Services) will:

2.4.2.1.1. Provide communications operations briefing materials to the LDCG Team Chief (prior to the LDCG planning meeting) and conducts a communications status briefing at the LDCG planning meeting.

2.4.2.1.2. Provide EAL to the LDCG Team Chief for Communications launch support personnel NLT three duty days prior to launch.

2.4.2.1.3. To meet the minimum criteria for launch operations, the following dedicated communications must be available at the fallback area (all launches):

2.4.2.1.3.1. Capability to monitor the countdown net (primary and alternate).

2.4.2.1.3.2. A voice line from the fallback area to the following agencies: OSM, LOCC, and MFCO.

2.4.2.1.3.3. A minimum of one Class A telephone.

2.4.2.1.3.4. Public address system (fallback area).

2.4.2.1.3.5. Radio Nets, as applicable.

2.4.2.1.4. Provide standby personnel/equipment in support of all missile launches.

2.4.2.1.5. Provide communications support to the OSC in the event of a launch anomaly.

2.4.2.2. 30 CS/SCSVMI (Instrumentation Section) will:

2.4.2.2.1. Provide a representative to attend LDCG planning meeting.

2.4.2.2.2. Provide EAL to the LDCG Team Chief for tracking launch support personnel NLT three duty days prior to launch.

2.4.2.2.3. Provide tracking site personnel and equipment as required to support all launches.

**2.5. 30<sup>th</sup> Operations Group:**

2.5.1. 30<sup>th</sup> Range Squadron:

2.5.1.1. 30 RANS/DOO (Aerospace Control Officer) will:

2.5.1.1.1. Provide a representative to attend LDCG planning meeting.

2.5.1.2. 30 RANS/DOO-A (Range Operations Commander) will:

2.5.1.2.1. Provide a representative to attend LDCG planning meeting

2.5.2. 30<sup>th</sup> Weather Squadron

2.5.2.1. 30 WS/DO (Operations) will:

2.5.2.1.1. Provide a representative to attend LDCG planning meeting.

2.5.2.1.2. Prepare and provides Cold Spill THZ to the LDCG as required.

2.5.2.1.3. Provide meteorological data for Hot Spill THZ to 30 SW Safety who, in turn, prepares and provides Hot Spill THZ to the LDCG (as required).

2.5.2.1.4. Act as weather advisor to the OSC and LDCG in the event of anomaly. (24-hour Weather Operations Center 606-8022.)

2.5.3. 2<sup>d</sup> Space Launch Squadron:

2.5.3.1. 2 SLS/DO (Operations Branch) will:

2.5.3.1.1. Provide briefing materials to the LDCG Team Chief (prior to the LDCG planning meeting) and conducts a hazardous commodities briefing at the LDCG planning meeting.

2.5.3.1.2. Provide a representative to attend applicable LDCG planning meeting.

2.5.3.1.3. Provide EAL to the LDCG Team Chief for 2 SLS launch support personnel NLT three duty days prior to launch.

2.5.3.1.4. Provide support to the LDCG Team Chief during pre-launch activities.

2.5.3.1.5. Provide Post-Launch Site Securing Team (Red Team) pre-positioned for response to site.

2.5.3.1.6. Act as advisor to the OSC during a launch anomaly.

2.5.3.1.7. Provide Payload Recovery Team positioned at the fallback to support LDCG functions.

2.5.4. 76<sup>th</sup> Helicopter Flight:

2.5.4.1. 76 HF/DOO (Operations) will:

2.5.4.1.1. Provide a representative to attend LDCG planning meeting.

2.5.4.1.2. Provide helicopter security support for all launches.

2.5.4.1.3. Provide helicopter fire fighting support during post-launch activities as required.

**2.6. 576<sup>th</sup> Flight Test Squadron:**

2.6.1. 576 FLTS/TEE (Systems Engineering Flight) will:

2.6.1.1. Provide applicable SERT/LDCG briefing materials to the LDCG Team Chief (prior to the LDCG planning meeting) and conducts status briefing at the LDCG planning meeting.

2.6.1.2. Provide pre- and post-launch support for North Base launches.

2.6.2. 576 FLTS/TMGE (Electro-Mechanical Team) will:

2.6.2.1. Provide a representative to attend applicable LDCG planning meeting.

2.6.2.2. Provide the launch facility keys (North Base) to the LDCG member Operations Safety Technician (OST) once the LF is cleared and ready for launch.

2.6.2.3. Provide Bioenvironmental Engineering: A SNIFF Team for post-launch support.

2.6.2.4. Provide a Re-entry Team to conduct post-launch site safing.



2.6.3. 576 FLTS/TMOS (Scheduling Control Section) will:

2.6.3.1. Provide a representative to attend applicable LDCG planning meeting.

2.6.3.2. Provide 576th organization access list to the LDCG Team Chief for launch support personnel.

**2.7. DET 9, SMC will:**

2.7.1. Provide a representative to attend LDCG planning meeting.

2.7.2. Provide EAL to the LDCG Team Chief for Det 9 launch support personnel NLT three duty days prior to launch.

2.7.3. Provide applicable launch vehicle briefing materials to the LDCG Team Chief (prior to LDCG planning meeting) and conduct status briefing at the LDCG planning meeting.

2.7.4. Provide technical support to the LDCG in the event of an anomaly.

**2.8. National Reconnaissance Office (NRO) will:**

2.8.1. Provide a representative to attend LDCG planning meeting.

2.8.2. Provide EAL to the LDCG Team Chief for NRO launch support personnel NLT three duty days prior to launch.

2.8.3. Provide payload briefing materials to the LDCG Team Chief (prior to the LDCG planning meeting) and conducts Payload Recovery Team status briefing at the LDCG planning meeting.

2.8.4. Provide all payload-related technical support to the LDCG in the event of an anomaly.

2.8.5. Provide Payload Recovery Team positioned at the fallback to support LDCG Functions.

**2.9. Launch Services Support Contractor (LSSC) will:**

2.9.1. Provide a representative to attend LDCG planning meeting.

2.9.2. Provide EAL to the LDCG Team Chief for LSSC contractor launch support personnel NLT three duty days prior to launch.

2.9.3. Provide communications support before and during all launch activities.

**2.10. Range Operations and Maintenance Services Support Contractor (ROMSSC) will:**

2.10.1. Provide a representative to attend LDCG planning meeting.

2.10.2. Provide EAL to the LDCG Team Chief for ITT launch support personnel NLT three duty days prior to launch.

**2.11. Other Commercial Agencies will:**

2.11.1. Provide a representative to attend LDCG planning meeting.

2.11.2. Provide EAL to the LDCG Team Chief for launch support personnel.

2.11.3. Provide briefing materials and briefing as requested by the LDCG Team Chief.

2.11.4. Provide Payload Recovery Team positioned at the fallback to support LDCG functions

2.11.5. Provide Post-Launch Site Securing Team (Red Team) pre-positioned for response to site.

### 3. LDCG Operational Requirements:

**3.1. Major Launch Operations.** The LDCG shall be available for immediate response to a missile and/or space vehicle impact on the Western Range or the public domain. Response to an emergency shall be coordinated with the OSM to assure timely, effective, and safe response.

**3.2. Responsible Launch Agency.** Shall have the required missile or vehicle launch crew necessary to support the LDCG Team Chief at the fallback area at least 60 minutes prior to T-0. **NOTE:** If more than one fallback area is used, the crew should report to the primary fallback area.

### 4. Safety Control Areas:

**4.1. Safety Control Areas for Launch Operations.** Launch operations are the most hazardous activity on Vandenberg AFB. Therefore, establishing Safety Control Areas is essential. This paragraph provides specific information on the Safety Control Areas required for missile and space launches.

**4.2. Toxic Hazard Zone.** For launch operations, when either the booster or the payload (or both) contain five gallons or more of toxic propellants, a Potential Hazard Zone (PHZ) may be established. The decision on whether or not to compute a PHZ will be made on a case-by-case basis by 30 SW/SE. The LDCG Team Chief maintains a base grid map, 1" = 3000', with overlays of the FHA/FCA. This map will be maintained at the fallback. The PHZ, if required, will be superimposed on this map. The Launch Support Plan will define, as necessary, THZ plotting procedures for launches.

**4.3. Radiological Hazard Corridor.** For launch operations when a minor radioactive source is present, a Radiological Hazard Corridor will be established as determined by the Radiation Protection Officer (bioenvironmental engineer). This information will be published in the Health Physics Addendum to the Launch Support Plan.

**4.4. Hazard/Danger Area.** During portions of the pre-launch processing, certain tasks create potentially hazardous or dangerous conditions requiring evacuation of all nonessential, and in some cases, all personnel from within the hazard/danger area. The size of the area depends on the potential hazard involved.

**4.5. Flight Hazard Area.** The FHA is that area in which significant danger to personnel and equipment exists if there is a malfunction during the early phases of missile flight. It is the ground and air space extending to an unlimited altitude and includes the entire area where the risk of serious injury, death, or substantial property damage is so severe to necessitate excluding all personnel and equipment not needed to conduct the launch operation. The dimensions of the FHA will vary with the missile or space system involved. The applicable Launch Support Plan (LSP) will include the FHA for the particular launch operation. Use the FHA shown in the LSP for pre-launch planning purposes. The FHA, if required, will be enlarged using launch day wind calculations. The FHA may be expanded, but never reduced from the LSP size. Immediately relay any expansion of the FHA by the MFCO to the LDCG Team Chief to evaluate possible area control changes. The only personnel allowed inside the FHA will be those Essential Personnel inside a Hardened Shelter (i.e., blockhouse). The number of personnel allowed within the Hardened Shelter (i.e., LOB) will not exceed the number for which a two-hour supply of breathing air is available. The LSP contains additional safety requirements.

**4.6. Flight Caution Area.** The FCA is that area outside the FHA where injury or property damage could occur because of a missile flight failure. The area dimensions will vary with the missile or

space system involved. The applicable LSP will reflect the FCA for the particular launch operation. Use the FCA shown in the LSP for pre-launch planning purposes. The FCA, if required, will be enlarged using launch day wind calculations. The FCA may be expanded, but never reduced from the LSP size.

4.6.1. The FCA is a restricted area, and only Essential Personnel are allowed to remain during launch operations. All organizations will submit requests to 30 SW/SE for Essential Personnel to be located within the FCA. These requests must be received no later than 48 hours before launch day, stating the number of personnel involved at T-0 for each location. State full names, rank or grade, last six of SSN, location, and telephone number.

4.6.2. When possible, all personnel within the FCA will be in Hardened Shelters; however, Essential Personnel may occupy other facilities at the discretion of 30 SW/SE, in coordination with the MFCO. This approval will only be granted after a thorough analysis of the hazards to personnel, as determined by computer data available to the MFCO. In instances where a greater than reasonable risk is involved, coordination with the 30 SW Commander will be necessary before launch.

4.6.3. Additional FHA/FCA requirements:

4.6.3.1. Training (dummy) missiles need no special protection.

4.6.3.2. Access to, and movement within, the FHA/FCA will be granted during pre-launch and post-launch operations only when such actions are essential to the missile/space launch mission and will be under the direct control of the LDCG Team Chief, after consultation with the OSM, Launch Director, or OSC as appropriate.

4.6.3.3. The FHA/FCA will be activated or deactivated simultaneously according to the Launch Support Plan or as needed by the LDCG Team Chief after coordination with the OSM.

4.6.3.4. The FHA and FCA will remain in effect until damage assessments and emergency actions are completed. The Security Forces (MOS Unit), under control of the LDCG Team Chief who coordinates with the OSM/OSC and LOCC Safety Officer, will control access. The primary concern is to protect life, and then, Air Force equipment. Launch anomalies or non-catastrophic mishaps will require securing the launch facility or SLC by the LDCG Team Chief, and establishing control by the MOS security unit. After initial safety concerns are addressed, the LDCG Team Chief, after coordination with the Security Forces and OSM, may remove or adjust roadblocks as necessary for the specific hazardous condition noted during post-launch safing operations. Finally, security concerns must be adequately addressed before removing roadblocks.

4.6.3.5. The LDCG will have an accurate headcount and location of all personnel inside the FHA/FCA. This information will be relayed to the OSC and the LOCC.

4.6.3.6. Personal Protective Equipment requirements within the FHA/FCA. All 30 SW personnel should wear fire retardant suits (i.e., Nomex) and will have Emergency Life Support Apparatus (ELSAs) available.

**4.7. Impact Limit Line (ILL).** The outermost boundary for containment of missile debris or specified debris fragments from a launch anomaly is defined as an Impact Limit Line. The ILL is always constructed conservatively during the early launch planning phase so as to exclude nonessential personnel groupings to the extent possible. Remaining groups of persons within the ILL, including DVs

and media representatives, are subject to limitations of numbers and locations during the planning cycle, plus further review for risk management purposes and possible relocation on launch day. Wind conditions may be such on launch day that population centers outside of the ILL may likewise require risk management actions. Personnel within the ILL are strongly encouraged to have appropriate breathing apparatus for emergency evacuation purposes.

**4.8. Fallback area.** Fallback areas are activated for all launches. During launch operations, fallback areas are restricted to emergency response personnel and equipment as authorized by the LDCG Team Chief and OSC. If the fallback area is inside the FCA, the OSC as part of the DCG, may be at the fallback. If the fallback area is outside the FCA, the OSC may elect to position the Mobile Command Post and all necessary personnel at the fallback. Because of variable meteorological conditions, some fallback areas fall within the Potential Hazard Zone, and should an accident occur, might be within the toxic plume. All LDCG personnel, personnel assigned to additional emergency response teams, or others positioned within the FHA/FCA, will have appropriate breathing apparatus and ear protection in their possession during missile and space launch operations.

**4.9. Distinguished Visitor (DV), Media, and Public Viewing Areas:**

4.9.1. The DV, Media, and Public viewing area for North Vandenberg launches is Del Punta Viewing Ground. One exception, SLC 2 launch viewing area will be located at Building 21150 (Vandenberg Weather Station).

4.9.2. The Public Viewing area for South Vandenberg launches is Building 1521 (Rod & Gun Club). The DV and Media viewing area is located at Tracking Site 45. **NOTE:** There is currently no viewing area established for SLC 6.

4.9.3. Personnel departing the cantonment area for the purpose of observing missile and space launches must proceed to their designated observation site and may not congregate in unauthorized areas or park on road shoulders. Personnel are not authorized to view missile launches from other than official observation sites.

**4.10. Vehicles in Launch Related Safety Control Areas.** Requirements exist to limit the risk of damage to government, contractor, and privately owned vehicles or equipment in launch related safety control areas. The following criteria will apply in the applicable Safety Control Area listed below:

4.10.1. Flight Hazard Area. Government and contractor owned or rented vehicles or equipment will be held to an absolute minimum. "Absolute minimum" is defined as vehicles or equipment absolutely necessary to the launch operation. No privately owned vehicles are authorized anywhere within the FHA. Unauthorized vehicles will be towed out of the FHA at the direction of the LDCG Team Chief, after consultation with the OSM and MFCO.

4.10.2. Flight Caution Area. Government and contractor-owned or rented vehicles or equipment directly essential to launch operations are authorized within the FCA, after 30 SW/SE approval. No privately owned vehicles are authorized anywhere within the FCA. Unauthorized vehicles will be towed out of the FCA at the direction of the LDCG Team Chief, after consultation with the OSM and MFCO.

4.10.3. Hazardous Operations. These operations may require evacuation of personnel and vehicles from a designated safety clear zone. Only government and contractor owned or rented vehicles are authorized. No privately owned vehicles are authorized. Unauthorized vehicles may be

towed out of the area at the discretion of the appropriate Task Supervisor, after consultation with 30 SW/SE.

4.10.4. Potential Hazard Zones. Normally, any vehicle outside FHA, FCA, ILL, or other Hazard and Danger Areas but inside a PHZ will not require removal. However, if removal is deemed appropriate, consult with 30 SW/SE.

4.10.5. Do not leave equipment, especially high value equipment which can be easily and economically moved, in the FHA/FCA, or in other hazard and danger areas. The unit concerned will decide which equipment may or may not be moved within this category. This determination date will be the sole responsibility of the contractor or commander concerned. The contractor or commander will provide a letter accepting responsibility/liability of the equipment not being moved to 30 SW/SE 48 hours before launch day.

4.10.6. The presence of unauthorized (nonessential) vehicles in the FHA/FCA or in another Hazard or Danger Area will be sufficient grounds to require a "NO GO" or Safety Hold until they can be removed, or until the requirement is waived according to procedures governing the overruling of a Safety Hold. Normally, for launch operations, the OSM/MFCO grants this waiver after analyzing the situation.

## 5. LDCG Actions During Launch Abort, Misfire, or Hangfire:

**5.1. Solid and Liquid Propellant Vehicles.** The LDCG will remain in place ready to support an anomaly response based on direction of the launch authority. Access to the launch pad/facility will be coordinated through the OSM and will be based on specific procedures for the launch system involved. Once the site is determined safe, the OSM will advise the LDCG Team Chief to adjust or lift roadblocks as necessary, and recommend release of the LDCG element.

## 6. Briefings and Meetings:

**6.1. Launch Battle Staff Briefing.** Prior to each launch, a Launch Battle Staff briefing is prepared by the LDCG Team Chief (see **Attachment 4**) for those individuals assigned to the Launch Battle Staff. This briefing is presented by the Launch Battle Staff Safety representative and provides the Battle Staff members with information on hazards, manned locations, evacuation and sheltered areas, and anomaly responses.

**6.2. System Engineering Response Team Briefing (576 FLTS operation only).** This briefing is conducted in conjunction with the LDCG Briefing. IAW the UDS the 576 FLTS/TEE section is responsible for providing this briefing. The briefing outlines response actions taken by a team of technicians and advisors under the direction of 576 FLTS/TEE during launch anomalies and malfunctions.

**6.3. Launch Disaster Control Group (LDCG) Planning meeting.** Before each launch, IAW the UDS, 30 SW/SE presents a missile safety and Launch Disaster Control Group (LDCG) briefing, see **Attachment 3**. This briefing provides LDCG members and other affected agencies information regarding evacuation of safety control areas, time lines for safety actions, facilities in the controlled areas and procedures for post-launch or abort contingencies.

**6.4. Launch Readiness Review (LRR) Briefing.** Prior to launch, the launch agency convenes a readiness review for the 30 SW/CC. The review includes mission overview, major preparatory actions required and completed, significant problems identified, launch constraints parameters, and a summary of range support required to satisfy objectives. Briefing agencies (government and civilian)

certify to the 30 SW/CC completion of preparatory and test order annex actions and readiness for launch.

**6.5. T-60/30 Briefing.** Once the LDCG is formed at the fallback area, the On-Scene Commander conducts two briefings, a T-60 and T-30 minute briefing. The T-60 briefing is conducted to determine the readiness of all LDCG elements and to obtain current launch status. The T-30 briefing provides the current launch status, anomaly response actions, and nominal launch response to site.

Alexander Carlisle, Col, USAF  
Chief of Safety

**Attachment 1**

**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION**

***Abbreviations and Acronyms***

**30 SW**—30th Space Wing  
**30 SW/CP**—Command Post  
**30 SW/PA**—Public Affairs  
**30 SW/SE**—Safety  
**30 SW/SEGP**—Pad Safety  
**30 AMDS**—30th Aerospace Medicine  
**30 AMDS/SGPB**—Bioenvironmental Engineering  
**30 CES**—30th Civil Engineer Squadron  
**30 CES/CED**—Explosive Ordnance Disposal  
**30 CES/CEF**—Fire Protection  
**30 CES/CEO**—Operations Flight  
**30 CES/CEX**—Readiness Flight  
**30 CS**—30th Communications Squadron  
**30 CS/CCE**—Executive Services  
**30 CS/SCSVMI**—Instrumentation Section  
**30 RANS**—30th Range Squadron  
**30 RANS/DOO**—Range Current Operations  
**30 SFS**—30th Security Forces Squadron  
**30 SFS/SFOS-M**—Missile Operations Support  
**30 SPTG**—30th Support Group  
**30 SPTG/CC**—Support Group Commander  
**30 TRNS**—30th Transportation Squadron  
**30 TRNS/LGTO**—Vehicle Operations Flight  
**30 WS**—30th Weather Squadron  
**30 WS/DOR**—Range Weather Operations Flight  
**76 HF**—76th Helicopter Flight  
**2 SLS/DO**—2d Space Launch Squadron Operations Branch  
**576 FLTS**—576th Flight Test Squadron  
**576 FLTS/TEE**—Systems Engineering Flight

**576 FLTS/TMGE**—Electro-Mechanical Team

**576 FLTS/TMOS**—Scheduling Control Section

**Det 9, SMC**—Detachment 9, Space and Missile Systems Center

**ACO**—Aerospace Control Officer

**AFSPC**—Air Force Space Command

**CDC**—Command Destruct Check

**EAL**—Entry Access List

**EHZ**—Emission Hazard Zone

**EMT**—Electro-Mechanical Team

**ELSA**—Emergency Life Support Apparatus

**EWR**—Eastern and Western Range

**FCA**—Flight Caution Area

**FHA**—Flight Hazard Area

**FDE**—Force Development Evaluation

**IAW**—In Accordance With

**ILL**—Impact Limit Line

**LD**—Launch Director

**LDCG**—Launch Disaster Control Group

**LF**—Launch Facility

**LFT**—Launch Facility Team

**LOB**—Launch Operations Building

**LOCC**—Launch Operations Control Center

**LSP**—Launch Support Plan

**LSSC**—Launch Services Support Contractor

**LDCG**—Launch Disaster Control Group

**MFCO**—Mission Flight Control Officer

**MOS**—Missile Operations Security

**OHZ**—Operational Hazard Zone

**OPR**—Office of Primary Responsibility

**OSC**—On-Scene Commander

**OSM**—Operations Safety Manager

**OST**—Operations Safety Technician



**OT&E**—Operational Test and Evaluation

**PHZ**—Potential Hazard Zone

**POV**—Privately Owned Vehicle

**RHC**—Radiological Hazard Corridor

**ROC**—Range Operations Commander

**ROMSSC**—Range Operations and Maintenance Service Support Contractor

**SERT**—System Engineering Response Team

**SLC**—Space Launch Complex

**SWI**—Space Wing Instruction

**THZ**—Toxic Hazard Zone

**UDS**—Universal Documentation System

**VAFB**—Vandenberg Air Force Base

**WR**—Western Range

### *Terms*

**Aerospace Control Officer (ACO)**—The ACO is the WR representative responsible for ensuring launch area clearance of the public to include people, boats, trains and aircraft during launch operations. The ACO will clear land, air, and sea traffic based on requirements established by the MFCO.

**Abort**—The condition when missile lift-off fails to take place after entry into terminal count because of a deliberate action.

**Cold Spill**—Release of toxic propellants in liquid or vapor form from a propellant transfer or vent operation.

**Danger Area**—A circular controlled surface area centered on the launcher or SLC. Its specific dimensions vary with each missile or space system.

**Disaster Control Group**—This group responds to the scene of a missile accident to provide command and control.

**Entry Access List (EAL)**—The EAL is a by-name request of mission-essential personnel for access into the FHA, FCA, and ILL during launch day. The EAL is prepared by the responsible launch/launch support agencies. The EAL consists of: individual's full name, rank/grade, last six of the Social Security Number (SSAN), location within the controlled area at T-0, and telephone number. The EAL will be submitted to the LDCG Team Chief NLT three duty days prior to launch. The EAL is used by the LDCG element during the launch day to account for personnel within the FHA, FCA, and ILL.

**Emission Hazard Zone (EHZ)**—See Toxic Hazard Zone (THZ) for related definitions.

**Fallback Area**—An area outside the missile FHA activated for all launches. During launch operations, fallback areas are restricted to emergency response personnel and equipment as authorized by the LDCG Team Chief.

**Flight Caution Area (FCA)**—The controlled ground area outside of the FHA where injury or property

damage could occur because of a launch vehicle flight failure. The FCA is restricted to only mission-essential personnel during launch operations.

**Flight Hazard Area (FHA)**—The area in which significant danger to personnel and equipment would exist in the event of a malfunction during early phases of launch vehicle flight; the ground and air space extending to an unlimited altitude, including the entire area where the risk of serious injury, death, or substantial property damage is so severe it necessitates exclusion of all personnel and equipment not needed to support the launch operation (nonessential personnel). Personnel required to be in the FHA during launch must be located in blast hardened and approved structures.

**Hangfire**—A condition that exists when the ignition signal is known to have reached an initiator but ignition of the propulsion system is not achieved.

**Hazard Area**—A controlled area where hazardous operations or conditions exist. This area normally extends to the affected LF or SLC perimeter fence. Examples of hazardous operations

would be, an igniter installation, fuel load, or destruct package installation, etc. Only essential personnel may enter the area in the event of an anomaly.

**Hazard Period**—The time period during which a hazard area is activated.

**Hardened Shelter**—A facility which is designed and constructed to provide resistance to blast and fragment damage and, when applicable, to protect personnel inside from overpressure, is considered to be hardened.

**Hot Spill**—Release of toxic propellants through propellant combustion, such as a launch operation.

**Immediately Dangerous to Life or Health (IDLH)**—The current National Institute for Occupational Safety and Health (NIOSH) definition for IDLH is “a condition that poses a threat of exposure to airborne contaminants when that exposure is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment.” The level of exposure for the IDLH “is to ensure the worker can escape from a given contaminated environment in the event of a failure of the respiratory protection equipment.” The effects at these levels are based on an exposure time of 30 minutes to add a safety margin. However, workers should not stay in the environment any longer than necessary. Evacuation should take place immediately.

**Impact Limit Line (ILL)**—The line defining a limit beyond which a hazardous launch vehicle and/or payload debris shall not be allowed to impact.

**Launch Battle Staff**—Under the direction of 30 SW/CC, the 30 SW Battle Staff is formed one hour prior to launch.

**Launch Battle Staff Briefing**—Under the direction of 30 SW/CC, the LDCG Team Chief produces a briefing for the Launch Battle Staff. The briefing is conducted prior to designated launches, usually only space launches; however, a briefing will be required whenever the Launch Battle Staff forms.

**Launch Disaster Control Group (LDCG)**—A team, under the direction of 30 SW/SEGP, composed of trained technical personnel pre-positioned for rapid response to emergencies during missile or space launch operations.

**Launch Disaster Control Group Team Chief**—A 30 SW commander representative with overall responsibility for the LDCG. The individual prepares and coordinates the Launch Support Plan, and provides overall LDCG leadership. In addition, directs pre- and post-launch activities that ensure key

personnel and equipment are in place and ready to support the LDCG. Also, responsible for ensuring area safety by validating the launch facility and FHA, FCA, and ILL areas are clear of all nonessential personnel prior to launch. In the event of a catastrophic launch abort failure, the Disaster Control Group On-Scene Commander will assume control of the LDCG. When relieved, the LDCG Team Chief will assist the OSC as necessary, and become the Safety representative for the DCG.

**Launch Operations Control Center (LOCC)**—A 30 SW facility used as the command center for AFSPC launch operations. This facility is used by various agencies; e.g., Test Manager, Launch Analysis personnel, civilian contractors, and other mission-essential and support personnel during AFSPC Launches.

**Launch Recovery Team**—For certain launches, the 30 SW/CC appoints a Payload Recovery Team (LRT) to form up at the fallback area with the LDCG. Though not officially part of the LDCG, the LRT's presence at the fallback area is essential if there is a catastrophic launch abort failure. Basically, the LRT recovers and secures the payload once cleared into the accident area by the OSC.

**Misfire**—Condition that exists when it is known that the ignition signal has been sent to an initiator and ignition of the initiator was not achieved.

**Mission-Essential Personnel**—The minimum number of personnel necessary to successfully and safely complete a hazardous operation and whose absence would hinder the completion of the operation.

**Mission Flight Control Officer (MFCO)**—The MFCO is responsible for overall launch hazard assessment, determines safety readiness to support the launch, and monitors checkout procedures on the Flight Termination System. The MFCO monitors the performance of launch vehicles in flight and initiates flight termination action when launch vehicles violate flight safety criteria. The MFCO, with the Senior MFCO's concurrence, provides the safety readiness GO/NO-GO decision to the ROC.

**Nonessential Personnel**—Personnel not required for successful completion of a specific operation. Also, personnel who do not meet the criterion for mission-essential or essential personnel.

**On-Scene Commander (OSC)**—This individual is responsible for command and control at the disaster site. All responding agencies or individuals at the disaster are under the command and control of the OSC.

**Operational Hazard Zone (OHZ)**—See Toxic Hazard Zone (THZ) for related definition.

**Operations Safety Manager (OSM)**—The OSM in coordination with the LDCG is responsible for ensuring the FHA, FCA, and ILL is clear. The OSM is also responsible for site safety and reports site safety status as appropriate. The OSM will have control of site aural/visual warning devices, status and alert lights and pad video. The OSM is responsible for all safety aspects of the SLC/LF and ILL to include countdown, pad clearing, and re-entry.

**Operations Safety Technician (OST)**—The designated individual appointed to assist the OSM. The OST ensures safety functions are accomplished in a safe and healthful manner for all pre- and post-launch activities.

**Potential Hazard Zone (PHZ)**—Planning zone established prior to a specific operation to assess risk should an accidental cold spill or unplanned release, or a hot spill catastrophic abort occur. The zones are based upon the worst-case credible emission rate or source strength for a specific operation.

**Radiological Hazard Corridor**—A corridor/area established encompassing all known or suspected radiological contamination.

**Range Operations Commander (ROC)**—The ROC is the senior WR representative for launch operations and serves as the liaison between the launch agency and the WR. The ROC manages, directs, and controls WR resources, ensuring all instrumentation is capable and ready to support all phases of launch operations. This includes WR instrumentation support, contingency support requirements, aircraft and seacraft support, and support by off-range assets. The ROC certifies WR readiness and provides the launch agency the final overall WR GO/NO-GO recommendations.

**Safety Control Areas**—Areas under the control of the OSM with assistance from the OST and Security Forces during missile build-up, hazardous operations, and pre- and post-launch activities. These areas include the LFs, SLCs, FHA, FCA, ILL, RHC, Fallback Areas, Viewing Areas, Danger and Hazard Areas.

**Safety Hold**—A directive to either prevent an operation from starting or stopping an operation already underway. Safety holds may be called if safety criteria cannot be assured or maintained, safety criteria is jeopardized, or an imminently dangerous situation exists. As necessary, the LD will react to verbal inputs from the OSM or MFCO to enter a hold or prevent launch.

**System Engineering Response Team (SERT)**—A team of technicians and advisors pre-positioned for rapid response to launch anomalies and malfunctions. This team, under the direction of the 576 FLTS/TEE, conducts on-site investigations of anomalies and hangfires for 576 FLTS launches (PK, MM).

**Tier 1**—See Toxic Hazard Zone (THZ) for related definitions.

**Tier 2**—See Toxic Hazard Zone (THZ) for related definitions.

**Tier 3**—See Toxic Hazard Zone (THZ) for related definitions.

**T-0 (T minus zero)**—For launch operations, T-0 is the opening of a launch window or planned lift-off time.

**Toxic Hazard Zone (THZ)**—A generic term that describes an area in which predicted concentration of propellant or toxic byproduct vapors or aerosols may exceed acceptable exposure concentrations expressed as “Tier 3, 2, or 1” (Tier 3 representing higher concentrations and Tier 1 the lowest). Plume predictions are based on an analysis of potential source strength, applicable human exposure limit, and prevailing meteorological conditions. THZs are plotted for potential, planned and unplanned propellant releases, and launch operations, and are referred as OHZs, PHZs and EHZs. Refer to SWI 91-106.

**Potential Hazard Zone (PHZ)**—A planning zone established prior to a specific operation to assess risk should an accidental cold spill or unplanned release, or a hot spill from a catastrophic launch abort. The zones are based upon the worst-case credible emission rate or source strength for a specific operation.

**Zone 3**—An area where the airborne concentrations of any toxic product range from a low defined by Tier 3 to an unknown high. This zone can result from either a hot or cold spill.

**Tier 3**—An airborne exposure level (maximum concentration) based on the NIOSH IDLH values. Tier 3 separates Zone 3 from Zone 2.

**Zone 2**—An area where the airborne concentrations of any toxic product are equal to or exceed Tier 2 levels but are less than Tier 3 levels. This zone can result from either a hot or cold spill.

**Tier 2**—An airborne exposure level (maximum concentration) which may cause short-term symptoms but which most individuals could endure without experiencing or developing irreversible or other serious

health effects or symptoms which could impair their ability to take protective action. Tier 2 separates Zone 2 from Zone 1.

**Zone 1**—An area where the airborne concentration of any toxic product are equal to or exceed Tier 1 levels but are less than Tier 2 levels. This zone can result from either a hot or cold spill.

**Tier 1**:—An airborne exposure level (maximum concentration) which poses no hazard to the general population but which may affect certain sensitive individuals (e.g., asthmatics, individuals with emphysema, and certain other lung-diseased people). Tier 1 separates Zone 1 from the area where no controls are required.

**Operational Hazard Zone (OHZ)**—The toxic hazard zone established following an accidental cold spill, unplanned release, or normal launch or catastrophic launch abort, based upon actual or worst-case credible source strength. Zones 1, 2, and 3 are established for an OHZ as appropriate.

**Emission Hazard Zone (EHZ)**—The toxic hazard zone established before a planned release of propellants into the atmosphere; e.g., propellant tank venting, scrubber venting, or HCI release from solid propellant combustion during nominal launch operations. An EHZ is based upon the worst-case credible rate or source strength.

**Western Range (WR)**—The WR provides command and control, metric data acquisition, instrumentation, communications, launch support services, and real-time range operations for space launch, ICBM testing, aeronautical, aerospace and other programs originating at VAFB. The 30<sup>th</sup> Space Wing is responsible for WR operations.

**Zone 1**—See Toxic Hazard Zone (THZ) for related definitions.

**Zone 2**—See Toxic Hazard Zone (THZ) for related definitions.

**Zone 3**—See Toxic Hazard Zone (THZ) for related definitions.

**Attachment 2****LDCG TEAM CHIEF PROCESS CHECKLIST**

**A2.1.** As upcoming launches are projected, fragmentary orders and support information will be forwarded by various base agencies. After review by the Section Chief, this information will be compiled in a Launch Support Plan (LSP) folder in file cabinet under the heading of "Upcoming Missions."

**A2.2.** Check the 45-Day Missile Operations Forecast Weekly. Launch dates, missile type, OP#, LF#, SLC# and times will appear on this forecast. Keep the LSP folder cover sheet updated.

**A2.3.** Schedule the Launch Disaster Control Group (LDCG) Planning meeting not earlier than 10 calendar days prior to the launch. See attachment 2 for LDCG planning meeting checklist.

**A2.4.** Approximately 21 days prior to the launch date, begin developing the LSP. Use the information provided in the Range Schedule to develop the LSP. LSP information includes:

A2.4.1. LDCG planning meeting Notification List for all space launches (as appropriate).

A2.4.2. LDCG planning meeting attendance roster.

A2.4.3. Respiratory protection requirements.

A2.4.4. LSP for the last launch from this facility and the latest Vandenberg launch (reference only).

A2.4.5. Request SEY to provide the FHA/FCA and the Impact Limit Line (ILL) map.

A2.4.6. Obtain Health Physics Addendum/Health Hazard summary from Bio-environmental (6-7811).

**A2.5. NOTE :** If any of the above items are missing, ensure that replacements are reproduced.

A2.5.1. This step involves an item-by-item rewrite of the last LSP for the LF/SLC to be used. Use the above information (para 4) as needed in addition to the following sources of information.

A2.5.2. Operational Safety Manager (OSM), will provide this information for all Space Launches. Verify console telephone number.

A2.5.3. Operations Safety Technician determined by the Section Chief. Include the location (LF/SLC) phone number.

A2.5.4. LDCG Team Chief will verify fallback telephone number. Contact (see 45-Day Missile Operations Forecast) Launch/Mission Director and verify correct console number.

A2.5.5. LOCC Staff Safety Officer. Obtain room and telephone number from Section Chief for location of the LOCC Staff Safety Officer and Interim Mishap Board President.

A2.5.6. Aerospace Control Officer (ACO), contact 30 RANS (6-9935) to determine ACO console phone number.

A2.5.7. Production Supervisor. Obtain this information from 576 MOCC (6-9061). Verify console phone number.

A2.5.8. Recovery Team Director (Space Lift Launches). Obtain this information from the applicable organization Launch Director.

A2.5.9. Review time on station reporting instructions for accuracy and applicability to the upcoming launch.

A2.5.10. Review T-times for applicability to the launch. Make changes as necessary.

A2.5.11. Verify fallback area to be used is correct.

A2.5.12. List only primary LDCG members that report to the operational fallback area.

A2.5.13. Auxiliary members, equipment, and augmentees are to be positioned outside the ILL (Auxiliary Fallback).

A2.5.14. Review sequence of events to ensure accuracy.

A2.5.15. Verify facilities listed in FHA/FCA with the map provided by SEY.

A2.5.16. Contact Missile Operations Support (MOS) and have them annotate the location of the road-blocks on the map.

A2.5.17. Contact 30 CS/SCSVC (6-3838) for photo site locations.

A2.5.18. Ensure all general restrictions are listed. These restrictions can be found in EWR 127-1.

A2.5.19. List attachments to the LSP. These include a map of the area (FHA/FCA/ILL) affected, Health Physics Addendum/Health Hazard Summary, and the fallback area parking plan.

A2.5.20. Section and LDCG Team Chief review the LSP for accuracy.

A2.5.21. Coordinate the LSP with the following agencies:

A2.5.21.1. 30 SW/SEO.

A2.5.21.2. 30 SW/SEY.

A2.5.21.3. 30 SW/SEGP.

A2.5.22. Submit the plan to the Section Chief for approval and signature.

**A2.6.** Reproduce the LSP (usually 80 copies). Ensure "FOUO" marking on LSP.

**A2.7.** Monitor the weekly operations schedule and the Range Support Schedule (RSS) for launch related activities.

**A2.8.** Contact the appropriate system Wing Office of Primary Responsibility (WOPR) to ensure chemical toilet is in place at the fallback area.

**A2.9.** Confirm launch date (SEO/SEY) and establish a date, time, and place for LDCG planning meeting.

**A2.10.** One week prior to the scheduled LDCG planning meeting, notify all agencies on the briefing notification List.

**A2.11.** Prepare LDCG Safety presentation from the LSP.

**A2.12.** Compile briefings from applicable support agencies to develop the LDCG Readiness Review (Briefing).

**A2.13.** Ensure Letter of Equipment Responsibility is received from applicable contractors. This letter is required any time high value equipment is located in the FHA/FCA during all launches.

**A2.14.** Ensure all personnel access lists are received by this office 48 hours prior to launch. As a minimum, access lists should be received from the following agencies:

A2.14.1. 30 SW/SEO.

A2.14.2. 30 CES/CEX.

A2.14.3. 30 SFS/SFOM.

A2.14.4. 30 CS/SCSVMI.

A2.14.5. 30 CES/CEOEL.

A2.14.6. 30 CES/CEF.

A2.14.7. 30 CS/SCMD.

A2.14.8. 30 TRNS/LGTO.

A2.14.9. 30 AMDS/SGPB.

A2.14.10. Range Users (Response Force).

**A2.15.** Perform fallback area communications check 48 hours prior to launch.

**A2.16.** Ensure crew rest as applicable.

**A2.17.** Establish a rendezvous time for safety personnel to depart for the fallback area. Must depart at least 30 minutes prior to fallback arrival time. Ensure the vehicle is fueled and equipment is in the vehicle to include:

A2.17.1. Radios and binoculars.

A2.17.2. LDCG Book to include:

A2.17.2.1. LSPs.

A2.17.2.2. EALs.

A2.17.2.3. LDCG briefing material.

A2.17.2.4. Evacuation Requirements.

A2.17.2.5. Launch Battle Staff Briefing.

A2.17.2.6. Recall Roster.

A2.17.2.7. Toxic Hazard Corridor equipment (protractor, checklist).

A2.17.3. Respiratory, ear protection, and flame-retardant suits (Nomex) for each member present.



**Attachment 3****LDCG PLANNING MEETING CHECKLIST****A3.1. LDCG planning meeting.**

- A3.1.1. On the day of the briefing, arrive at the scheduled room approximately 30 minutes prior to the briefing time. Prepare the room for your presentation to include a checkout of the overhead projector and computer setup.
- A3.1.2. If classified briefing, see conducting classified briefing checklist.
- A3.1.3. Ensure that all attendees sign the briefing attendance roster.
- A3.1.4. Introduce yourself.
- A3.1.5. State the purpose of the briefing.
- A3.1.6. Identify key personnel associated with the launch.
- A3.1.7. Identify launch information (site, operation number, launch window).
- A3.1.8. Identify the local times for each milestone (T- ) in the LSP.
- A3.1.9. A3.1.9. Discuss post-launch actions (site securing, scrub launch).
- A3.1.10. A3.1.10. Identify hazardous materials. Brief personnel on Personnel Protective Equipment such as ear, respiratory, and Nomex requirements associated with the launch.
- A3.1.11. A3.1.11. Explain MOS roadblocks and sweeps.
- A3.1.12. A3.1.12. Identify photo sites.
- A3.1.13. A3.1.13. Identify the requirement to receive personnel access lists three duty days prior to launch.
- A3.1.14. Identify authorized distinguished visitors, press, and base population viewing sites.
- A3.1.15. Cover any special items.
- A3.1.16. Introduce the briefing agencies to include:
  - A3.1.17. Engineering Response Team (ERT) (when applicable).
  - A3.1.18. System Project Office (SPO) (for applicable missile briefing).
  - A3.1.19. Bio-environmental Engineering.
  - A3.1.20. Fire Chief.
  - A3.1.21. Security Forces (MOS) Representative.
  - A3.1.22. Civil Engineering Representative.
  - A3.1.23. Readiness Representative.
  - A3.1.24. Discuss other support requirements as necessary.
  - A3.1.25. Summarize the briefing.

**Attachment 4****LDCG LAUNCH BATTLE STAFF BRIEFING CHECKLIST**

**A4.1.** 30 SW/XPO will contact this office by e-mail or telephone advising time, date and location of the Launch Battle Staff (LBS) and Contingency Support Staff (CSS) form-up.

**A4.2.** Ensure an OST is scheduled to support the CSS and ensure they arrive on station at T-90.

**A4.3.** Prepare the LBS briefing using portions of the LDCG planning meeting broken-down into a left and right side slide show. The right side will cover briefing information and the left will depict support information (i.e., maps):

A4.3.1. Right side:

- A4.3.1.1. Introduction slide.
- A4.3.1.2. Overview slide.
- A4.3.1.3. On/off base evacuation areas.
- A4.3.1.4. On-base sheltered areas.
- A4.3.1.5. Hazard concerns.
- A4.3.1.6. Manned locations within the FHA/FCA.
- A4.3.1.7. Anomaly response personnel and location.
- A4.3.1.8. Additional slide information as needed.

A4.3.2. Left side:

- A4.3.2.1. Safety logo (to appear at the same time as the introduction slide).
- A4.3.2.2. Safety logo (with overview slide).
- A4.3.2.3. Evacuation area map.
- A4.3.2.4. Sheltered area map.
- A4.3.2.5. Safety logo (with hazard concerns).
- A4.3.2.6. Manned locations map.
- A4.3.2.7. Anomaly response personnel location.

**NOTE:**

The Launch Battle Staff Safety Representative will present this briefing at the Launch Battle Staff and field any questions.

**Attachment 5****LAUNCH BATTLE STAFF SUPPORT AND LDCG TEAM CHIEF REFERENCE CHECKLIST**

**A5.1.** The Launch Battle Staff Support Guide will be used by the CSS representative during all scheduled launches. The guide consists of the following information:

A5.1.1. Table of Contents:

- A5.1.1.1. Events Log.
- A5.1.1.2. Launch Support Plan.
- A5.1.1.3. Recall Roster.
- A5.1.1.4. Safety Standby List.
- A5.1.1.5. CSS Standby List.
- A5.1.1.6. EAL.
- A5.1.1.7. LDCG Planning Meeting Guide.
- A5.1.1.8. Launch Battle Staff Briefing Guide.
- A5.1.1.9. Additional Information as Required.
- A5.1.1.10. Launch Battle Staff Seating Chart (with telephone numbers).

A5.1.2. Additional Materials:

- A5.1.2.1. Protractor (used to plot Toxic Hazard Zones).
- A5.1.2.2. Listing of frequently used telephone numbers.
- A5.1.2.3. Notebooks.

**A5.2.** The LDCG Team Chief Reference Guide will be used by the LDCG Chief for all scheduled launches. The guide consists of the following:

A5.2.1. Table of Contents:

- A5.2.1.1. Events Log.
- A5.2.1.2. Launch Support Plan (2 copies).
- A5.2.1.3. Access List (EAL).
- A5.2.1.4. T-60/30 Safety Briefing.
- A5.2.1.5. LDCG Planning Meeting Guide.
- A5.2.1.6. Evacuation Requirements.
- A5.2.1.7. Launch Battle Staff Briefing Guide.
- A5.2.1.8. Launch Battle Staff Seating Chart (with telephone numbers).
- A5.2.1.9. Recall Roster.

A5.2.2. Additional Materials:

A5.2.2.1. Protractor (used to plot Toxic Hazard Zones).

A5.2.2.2. Listing of frequently used telephone numbers.

A5.2.2.3. Notebooks.

**Attachment 6**

**T-60/30 LDCG SAFETY BRIEFING CHECKLIST**

**A6.1. T-60 Safety Briefing.**

A6.1.1. Provide update on launch countdown progress (green/red and why).

A6.1.2. Brief all personnel.

A6.1.2.1. ELSAs and earplugs are required/readily available.

A6.1.2.2. Flame-retardant suits (Nomex) will be worn by 30 SW personnel when in the FHA/FCA.

A6.1.2.3. Sheltering requirements during an anomaly.

A6.1.2.4. Alternate fall-back during an anomaly.

A6.1.2.5. Vehicles parking in accordance with the LSP parking plan (facing exit).

**A6.2. T-30 Safety Briefing.**

A6.2.1. Provide update on launch countdown progress (green/red and why).

A6.2.2. Brief all personnel:

A6.2.2.1. ELSAs and earplugs are required/readily available.

A6.2.2.2. Flame-retardant suits (NOMEX) will be worn by 30 SW personnel when in the FHA/FCA.

A6.2.2.3. Sheltering requirements during an anomaly.

A6.2.2.4. Alternate assembly point after an anomaly.

A6.2.2.5. Reflective vests or belt required in the event of an anomaly.

A6.2.2.6. Response to Pad/LF during nominal launch.

A6.2.2.7. Speed of responding units (night 35 mph).

A6.2.2.8. Responding agencies (order determined by LDCG Team Chief):

A6.2.2.8.1. LDCG Chief/controller.

A6.2.2.8.2. Security Forces.

A6.2.2.8.3. Fire Department.

A6.2.2.8.4. Red Team South Base: (DELTA, Phase I & II for Titan) or Securing Team for North Base (576 FLTS Electro Mechanical Team, Launch Analysis Group).

A6.2.3. Advise the On-Scene Commander of:

A6.2.3.1. FHA/FCA/ILL areas evacuated of all nonessential personnel.

A6.2.3.2. Interim Mishap Board President is in place.

**A6.3. Ensure all vehicles are parked in accordance with the LSP parking plan (facing exit).**

**Attachment 7****LAUNCH ANOMALY CHECKLIST**

**A7.1.** Ensure the following Safety LDCG response actions are taken:

A7.1.1. Shelter all LDCG personnel.

A7.1.2. Contact the following:

A7.1.2.1. MFCO to verify outside observers status (VDL).

A7.1.2.2. 30 CS Support Flight to verify tracking sites status (6-3838).

A7.1.2.3. Affected manned locations (refer to attached listing); i.e., SVAFB Power Plant, Tranquillion Peak buildings and Slice's Operations Center to ensure accountability of all personnel and provide current status.

A7.1.2.4. OSM/MFCO to provide current personnel status within the ILL (VDL).

A7.1.2.5. Obtain debris pattern (impact location) coordinates from MFCO (VDL).

A7.1.2.5.1. Plot the debris pattern/THZ on footprint map.

A7.1.2.6. Advise all other affected agencies within the plotted area of required actions.

A7.1.2.7. ACO (6-4508) to obtain exact coordinates of the impact location and status of area from the 76 HF (helicopter).

A7.1.3. Ensure the On-Scene Commander addresses the following response actions:

A7.1.3.1. Readiness accounts for all sheltered LDCG personnel.

A7.1.3.2. ELSAs and earplugs are readily available (on person).

A7.1.3.3. Flame-retardant suits (Nomex) will be worn by 30 SW personnel when in the FHA/FCA.

A7.1.3.4. Accountability of all personnel within the ILL.

A7.1.3.5. Updates LDCG personnel of current status/information:

A7.1.3.6. All personnel will switch to the LDCG coded channel (keep radio communications/traffic to a minimum).

A7.1.3.7. No actions taken without the On-Scene Commander's Approval.

A7.1.3.8. Relocate to alternate reporting location via convoy (if applicable).

A7.1.3.9. Convoy Briefing:

A7.1.3.9.1. Order of vehicles for evacuation, (SF lead vehicle LDCG Team Chief trail).

A7.1.3.9.2. Lead SF vehicle use emergency lights; all other vehicles use headlights and emergency flashers.

A7.1.3.9.3. Use extreme caution when passing through intersections.

A7.1.3.9.4. Seat belts.

A7.1.3.9.5. Speed.

A7.1.3.9.6. Communication.

A7.1.3.9.7. Positioning of vehicles upon arrival (facing away from mishap scene).

**Attachment 8****LDCG POST-LAUNCH DOCUMENTATION CHECKLIST**

**A8.1. POST-LAUNCH.** Prepare a Launch Disaster Control Group Historical Package to be filed. This package will include a cover sheet with the following minimum attachments:

- A8.1.1. LSP.
- A8.1.2. LDCG Planning Meeting Notification List.
- A8.1.3. LDCG Planning Meeting Attendance Roster.
- A8.1.4. LDCG Planning Meeting Package.
- A8.1.5. Task Force Activity Schedule (if applicable).
- A8.1.6. Equipment Responsibility Letter (if needed).
- A8.1.7. Additional Documentation Supporting the Launch.
- A8.1.8. Mishap Investigation Report (if applicable).
- A8.1.9. Other Appropriate Data.

**A8.2.** If any problems were uncovered during the launch, document it on the cover of the Launch Disaster Control Group Historical Package under "Problems Encountered."

**A8.3.** Take necessary corrective action to solve the problem.

**A8.4.** Personnel reviewing the package are:

- A8.4.1. LDCG Team Chief.
- A8.4.2. Section Chief.
- A8.4.3. OSM.